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TRANSMITTAL FORM

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Filing Date	September 5, 2003
First Named Inventor	Hashimoto, Akiyoshi
Art Unit	2185
Examiner Name	Unassigned
Attorney Docket Number	16869S-093900US

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☒ Renewed Petition to Make Special
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
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Remarks The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Townsend and Townsend and Crew LLP		
Signature			
Printed name	Chun-Pok Leung		
Date	January 20, 2006	Reg. No.	41,405

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature			
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PATENT
Attorney Docket No.: 16869S-093900US
Client Ref. No.: W1145-01EF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

AKIYOSHI HASHIMOTO

Application No.: 10/655,692

Filed: September 5, 2003

For: FILE SERVER SYSTEM

Customer No.: 20350

Examiner: Unassigned

Technology Center/Art Unit: 2185

Confirmation No.: 6495

RENEWED PETITION TO MAKE SPECIAL FOR NEW APPLICATION UNDER M.P.E.P. § 708.02, VIII & 37 C.F.R. § 1.102(d)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Decision dated December 15, 2005 dismissing the original petition to make special, Applicants respectfully submit a renewed petition to make special the above-identified application under MPEP § 708.02, VIII & 37 C.F.R. § 1.102(d). The application has not received any examination by an Examiner.

(a) The Commissioner has previously been authorized to charge the petition fee of $130 under 37 C.F.R. § 1.17(i) and any other fees associated with this paper to Deposit Account 20-1430.

(b) All the claims are believed to be directed to a single invention. If the Office determines that all the claims presented are not obviously directed to a single invention, then Applicants will make an election without traverse as a prerequisite to the grant of special status.

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(c) Pre-examination searches were made of U.S. issued patents, including a classification search and a computer database search. The searches were performed on or around September 15, 2004, and were conducted by a professional search firm, Kramer & Amado, P.C. The classification search covered Class 709 (subclasses 203, 219, and 225), Class 711 (subclasses 111 and 112), and Class 713 (subclasses 165, 200, 201, and 202) for the U.S. and foreign subclasses identified above. The computer database search was conducted on the USPTO systems EAST and WEST. The inventors further provided three references considered most closely related to the subject matter of the present application (see references #4-6 below), which were cited in the Information Disclosure Statements filed on October 9, 2003.

(d) The following references, copies of which were previously submitted, are deemed most closely related to the subject matter encompassed by the claims:

(1) U.S. Patent No. 6,122,631;

(2) U.S. Patent Publication No. 2002/0103904 A1;

(3) U.S. Patent Publication No. 2003/0023784 A1;

(4) Bakke et al., "iSCSI Naming and Discovery," available on-line at http://www.ietf.org/internet-drafts/draft-ietf-ips-iscsi-name-disc-09.txt, Internet Draft of IPS Working Group, the Intenet Society (2002);

(5) Gibson et al., "File Server Scaling with Network-Attached Secure Disks," Proceedings of the 1997 ACM Sigmetrics International Conference on Measurement and Modeling of Computer Systems, Seattle, WA (1997); and

(6) VAHALIA UNIX Internals: The New Frontiers, pp. 291-313, Prentice Hall (1995).

(e) Set forth below is a detailed discussion of references which points out with particularity how the claimed subject matter is distinguishable over the references.

A. Claimed Embodiments of the Present Invention

The claimed embodiments relate to a file server that provides a plurality of networked clients with file services.

Independent claim 1 recites a file server system comprising a plurality of hard disk drives connected to a plurality of clients via a network; and a file control unit connected to the network for accepting an access request from the clients to the hard disk drives to manage the data input/output of the plurality of hard disk drives. The file control unit has configuration information with which a plurality of pieces of identification (ID) information, each identifying one of the plurality of hard disk drives, can be registered. The file control unit broadcasts a hard disk drive search message via the network. In response to the hard disk drive search message, the hard disk drive returns the ID information specifying the self hard disk drive to the file control unit. In response to the returned ID information, the file control unit establishes a setting such that the hard disk drive, which has returned the ID information, cannot communicate with devices on the network other than the file control unit.

Independent claim 11 recites a file server system comprising a plurality of switching hubs interconnected to form a network; a plurality of hard disk drives connected to clients via the network; and a file control unit. Each of the plurality of hard disk drives is connected to one of the plurality of switching hubs. The file control unit is connected to one of the plurality of switching hubs. The file control unit accepts an access request from the clients to the hard disk drives to manage a data input/output of the plurality of hard disk drives. The switching hubs perform control so that the file control unit and the plurality of clients belong to a virtual network and so that the file control unit and the plurality of hard disk drives belong to another virtual network.

One of the benefits that may be derived is securing the safety of data saved on hard disk drives when clients and hard disk drives are connected to the same LAN. By preventing the clients or the management terminal from reading data from, or writing data to, the hard disk drive without obtaining permission from the file control unit, the system ensures data safety since data is transferred always via the file control unit. In addition, by inhibiting the clients and the management terminal from directly accessing hard disk drives in the system employing separate virtual networks, the file control unit and the hard disk drives need not have the encrypted communication function and thus the cost may be reduced.

B. Discussion of the References

It is submitted that the cited references, whether taken individually or in combination with each other, fail to teach the invention as claimed. In particular, the cited references, at a minimum, fail to teach in combination with the other limitations recited in the claims:

a first feature of the present invention as recited in independent claim 1, wherein, in response to the hard disk drive search message, the hard disk drive returns the ID information specifying the self hard disk drive to the file control unit; and wherein, in response to the returned ID information, the file control unit establishes a setting such that the hard disk drive, which has returned the ID information, cannot communicate with devices on the network other than the file control unit (this ensures data safety since data is transferred always via the file control unit); and

a second feature of the present invention as recited in independent claim 11, wherein the file control unit in a file server system accepts an access request from the clients to the hard disk drives to manage a data input/output of the plurality of hard disk drives, and wherein the switching hubs perform control so that the file control unit and the plurality of clients belong to a virtual network and so that the file control unit and the plurality of hard disk drives belong to another virtual network (this reduces cost because the file control unit and the hard disk drives need not have the encrypted communication function).

1. U.S. Patent No. 6,122,631

This reference discloses a dynamic server-managed access control for a distributed file system 108 with a server file access token 120 which an object server 106 delivers to the distributed file system 108 and to the client 102. The client 102 uses the token in place of a standard file name. If a request to access (open) the file is received from a client with the token, the file is opened. Otherwise, the access request is denied. In this way, the object server 106 grants dynamic access to a protected file 110 in response to a request from a client 102 by generating a token 120 for that file. The procedure is transparent to the client, which uses the token in the same manner as it would use a regular file name.

The reference discloses the use of a token to provide dynamic access to a protected file. This is a different way of ensuring data safety from the technique of

establishing a setting in which the hard disk drive cannot communicate with devices on the network other than the file control unit. More specifically, the reference does not disclose the above-described first feature of the present invention as recited in independent claim 1. Because the reference is devoid of any disclosure of providing different virtual networks (one for the file control unit and the clients and the other for the file control unit and the hard disk drives), it also fails to teach the above-described second feature of the present invention as recited in independent claim 11.

2. U.S. Patent Publication No. 2002/0103904 A1

This reference discloses a method and an apparatus for controlling access to files associated with a virtual server. Each virtual server (116, 118, 120) is also assigned an identifier to uniquely identify that server and all files associated with that server (step 314). The server computing device 114 retrieves the identifier assigned to the existing file (step 316). Next, the server computing device determines whether the identifier is associated with the virtual server that generated the file access request (step 318). If the identifier is associated with the virtual server that generated the file access request, the server computing device allows access to take place (step 320).

The reference discloses the use of a file identifier to control access to files, and allows access when the file identifier matches the virtual server's identifier. This is a different way of ensuring data safety from the technique of establishing a setting in which the hard disk drive cannot communicate with devices on the network other than the file control unit. More specifically, the reference does not disclose the above-described first feature of the present invention as recited in independent claim 1. Although the reference discloses the use of virtual servers that operate within a separate virtual environment, it contains no disclosure of providing different virtual networks (one for the file control unit and the clients and the other for the file control unit and the hard disk drives). Thus, it also fails to teach the above-described second feature of the present invention as recited in independent claim 11.

3. U.S. Patent Publication No. 2003/0023784 A1

This reference relates to a storage system 1 having a plurality of controllers 20, disk array controllers 20, file servers 30, and disk drive units 41. The assigned controller identity number is the identification number of the controller 20 to which the disk drive unit

41 identified at path ID and address is allocated. A disk pool management unit 5 manages the storage area of a set of disk drive units 41 as a single large storage area referred to as a disk pool 4. The processor 51 of the disk pool management unit 5 searches the disk pool management table using the identification number in the inquiry as the search key to identify the disk drive units 41 that can be used by the inquiring controller 20. See [0070] and [0084].

The reference provides a disk pool management unit to manage the relationships between the disk controllers and file servers and the disk drive units used by the respective disk controllers and disk servers, using identification information that identifies the usable disk drive units to the respective disk controllers and file servers. This is a different way of controlling access from the technique of establishing a setting in which the hard disk drive cannot communicate with devices on the network other than the file control unit. More specifically, the reference does not disclose the above-described first feature of the present invention as recited in independent claim 1. Because the reference is devoid of any disclosure of providing different virtual networks (one for the file control unit and the clients and the other for the file control unit and the hard disk drives), it also fails to teach the above-described second feature of the present invention as recited in independent claim 11.

4. Bakke et al., "iSCSI Naming and Discovery," available on-line at http://www.ietf.org/internet-drafts/draft-ietf-ips-iscsi-name-disc-09.txt, Internet Draft of IPS Working Group, the Intenet Society (2002)

This reference discloses iSCSI which is a standard that allows SCSI protocol communication to be performed on a network. The reference provides background details of iSCSI, as described in the present application at page 2, lines 9-13. It does not teach the above-described first feature of the present invention as recited in independent claim 1 or the above-described second feature of the present invention as recited in independent claim 11.

5. Gibson et al., "File Server Scaling with Network-Attached Secure Disks," Proceedings of the 1997 ACM Sigmetrics International Conference on Measurement and Modeling of Computer Systems, Seattle, WA (1997)

This reference discloses NetSCSI and NASD, as discussed in the present application at page 2, line 14 to page 4, line 21. The reference provides background details of NetSCSI and NASD. It does not teach the above-described first feature of the present

invention as recited in independent claim 1 or the above-described second feature of the present invention as recited in independent claim 11.

6. VAHALIA UNIX Internals: The New Frontiers, pp. 291-313, Prentice Hall (1995)

This reference relates to NFS (Network File System), which is a technology for managing data on a file basis. A computer in which files are saved is called a file server, and a computer that uses the files saved in a file server via a network is called a client. NFS is a technology that allows the user to use files saved in the file server as if they were saved in the client's disk. In practice, NFS is defined as a network communication protocol between a file server and a client.

The reference provides background details of one popular data sharing technology, as described in the present application at page 1, lines 6-22. It does not teach the above-described first feature of the present invention as recited in independent claim 1 or the above-described second feature of the present invention as recited in independent claim 11.

(f) In view of this petition, the Examiner is respectfully requested to issue a first Office Action at an early date.

Respectfully submitted,

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